. PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of	Docket No: Q77182
Yong Suk KIM, et al.	
Appln. No.: 10/748,168	Group Art Unit: 2618
Confirmation No.: 6948	Examiner: PAN, YUWEN
Filed: December 31, 2003	

For: SHORT-RANGE WIRELESS COMMUNICATION SYSTEM AND A HANDOFF
PROCESSING METHOD THEREFOR

SUBMISSION OF APPEAL BRIEF

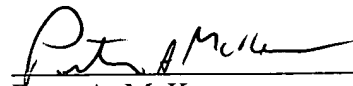**MAIL STOP APPEAL BRIEF - PATENTS**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of $500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE
23373
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Date: March 13, 2007

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

Table of Contents

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I.   REAL PARTY IN INTEREST

Based on the information supplied by the Appellant, and the best of Appellant's legal representative's knowledge, the real party in the interest is the assignee, SAMSUNG ELECTRONICS CO., LTD. The Assignment was recorded on December 30, 2003, at Reel 014866, Frame 0300.

II.   RELATED APPEALS AND INTERFERENCES

To the best knowledge and belief of Appellant, the Assignee and the undersigned attorney, there are no other appeals or interferences before the Board of Appeals and Interferences ("the Board") that will directly affect or be affected by the Board's decision in the present Appeal.

III.   STATUS OF CLAIMS

Claims 1-16 are appending in the application.

The Examiner maintains the rejection of Claims 1-16 under 35 U.S.C. § 103 as being unpatentable over Martini et al (USP 6,675,015) in view of Mitts et al (USP 5,940,371).

IV.   STATUS OF AMENDMENTS

No amendments have been filed in this application.

V.   SUMMARY OF THE CLAIMED SUBJECT MATTER

Claim 1:

Claim 1 relates generally to a short-range wireless communication system (see, for example, the specification at paragraph [31].

Claim 1 recites: "a host controller interface [for example, element 10 of Fig. 3; specification at paragraph [31]] provided with a handoff buffer for buffering at least one of Host Controller Interface (HCI) data and transmission data, and for exchanging said at least one of HCI data and transmission data with an external device" [for example, element 12 of Fig. 3; specification at paragraphs [32, 35]].

Claim 1 further recites: "a microcontroller for forwarding to a new Access Point (AP) said at least one of HCI data and transmission data buffered in the handoff buffer if a message indicating setup completion of a connection with the external device is transmitted from the new AP after a handoff occurs as the external device moves, in a state where the new AP is interlinked with the external device" [for example, element 30 of Fig. 3; specification at paragraph [34]].

Claim 5:

Claim 5 generally relates to a handoff processing method for a short-range wireless communication system [for example, see specification at paragraph 35].

Claim 5 recites: "storing in a handoff buffer at least one of Host Controller Interface (HCI) data and transmission data upon communications with an interlinked external device in a

state where a new Access Point (AP) is interlinked with the external device" [for example, element S420 of Fig. 4; specification at paragraph [35]].

Claim 5 further recites: "forwarding to the new Access Point (AP) said at least one of HCI data and the transmission data buffered in the handoff buffer if a message indicating setup completion of a connection with the external device is transmitted from the new AP after a handoff occurs as the external device moves" [for example, element S460 of Fig. 4; specification at paragraph [37]].

Claim 9:

Claim 9 relates generally to a Bluetooth system [for example, specification at paragraphs [41, 42]].

Claim 9 recites: "a host controller interface provided with a baseband buffer for buffering at least one of Host Controller Interface (HCI) data and transmission data, and for exchanging said at least one of said HCI data and the transmission data with an external device" [for example, element 12 of Fig. 3; specification at paragraphs [32, 35]]"

Claim 9 further recites: "a microcontroller for forwarding to a new Access Point (AP) said at least one of the HCI data and the transmission data buffered in the baseband buffer if an Inter Network Access Point (NAP) Communication (INC) acknowledge ACK message is transmitted from the new AP after a handoff occurs as the external device moves, in a state where the new AP is interlinked with the external device" [for example, element 30 of Fig. 3; specification at paragraph [34]].

7

Claim 13:

Claim 13 relates generally to a handoff processing method for a Bluetooth system [for example, specification at paragraphs [41, 42]].

Claim 13 recites: "storing in a handoff buffer at least one of HCI data and transmission data upon communications with an external device, in a state where a new Access Point (AP) is interlinked with the external device" [for example, element S420 of Fig. 4; specification at paragraph [35]].

Claim 13 further recites: 'forwarding to the new Access Point (AP) said at least one of the HCI data and the transmission data buffered in the baseband buffer if an INC ACK message is transmitted from the new AP after a handoff occurs as the external device moves" [for example, element S460 of Fig. 4; specification at paragraph [37]].

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The only issue on appeal is the rejection of claims 1-16 under 35 U.S.C. § 103 as being

unpatentable over Martini et al (USP 6,675,015) in view of Mitts et al (USP 5,940,371).

VII.   ARGUMENT

Appellant respectfully submits that claim 1 is patentable over Martini et al (USP 6,675,015) and Mitts et al (USP 5,940,371). One reason for this is that Martini and Mitts, taken either alone or in combination, do not teach or suggest a microcontroller for forwarding to a new Access Point (AP) said at least one of HCI data and transmission data buffered in the handoff buffer if a message indicating setup completion of a connection with the external device is transmitted from the new AP after a handoff occurs as the external device moves, in a state where the new AP is interlinked with the external device.

In a Response dated May 15, 2006, Appellant argued among other things, that the references do not teach or suggest a message indicating setup completion of a connection with the external device transmitted from the new AP after a handoff occurs, as required by claim 1 [see page 3 of response dated May 15, 2006]. In the Office Action dated July 10, 2006, the Examiner states, "The examiner respectfully disagrees because such indication is inherent for a handoff process." Paragraph bridging pages 2-3 of Office Action dated July 10, 2006.

In the Response filed October 10, 2006, Appellant argued:

"Mitts teaches after a handoff is effectuated, the mobile unit sends to the base station a LAST message that describes the last successfully received and forwarded cell. 'As a response to the LAST message and to the signaling data on the handover that indicate the new base station, old base station 40 transmits to the new base station 50 the cells that were in the FIFO buffer...' Col. 8, lines 26-29. Thus, Mitts does not teach or suggest:

> a microcontroller for forwarding to a new
> Access Point (AP) said at least one of HCI data and
> transmission data buffered in the handoff buffer <u>if</u>
> <u>a message indicating setup completion of a</u>
> <u>connection with the external device is transmitted</u>
> <u>from the new AP after a handoff occurs</u> as the
> external device moves, in a state where the new AP
> is interlinked with the external device

as is recited in claim 1."

In the Advisory Action dated October 23, 2006, the Examiner states:

"Prior art of reference teaches an old base station, obviously including a controller, for

forwarding to a new base station (a new access point) with some data information in the handoff

buffer, when the old base station receives a message of "signaling data on the handover that

indicate the new base station". Such signaling data indication could be sent from the new base

station by telling the old base station that the mobile unit (external device) has established

communicating with the new base station or the mobile unit could signaling the old base station

that it has handoff to the new base station. Either way was well known in the art of handoff."

Appellant respectfully submits that the references do not teach or suggest "a message

indicating setup completion of a connection with the external device is transmitted from the new

AP after a handoff occurs." In more detail, the Examiner admits that Martini does not teach this

feature. See, Office Action of July 10, 2006, page 3. Mitts, and specifically col. 5, lines 30-53,

has been applied to cure this deficiency. Appellant submits, however, that Mitts, at col. 5, lines

30-53 or elsewhere, does not teach or suggest the claimed microcontroller. One reason for this is that Mitts does not teach or suggest "a message indicating setup completion of a connection with the external device is transmitted from the new AP after a handoff occurs." From the Examiner's statement in the Advisory Action (quoted above), it appears that the Examiner equates the old base station receiving "signaling data on the handover that indicate the new base station" with a signal indicating setup completion of a connection. However, there is no such teaching or suggestion in this reference. Signaling data on the handover that indicate the new base station does not teach or suggest anything regarding an indication indicating setup completion after a handoff occurs. Rather, this data simply indicates the new base station. Furthermore, the Examiner's statement in the Advisory Action notwithstanding, there is no teaching or suggestion that "signaling data on the handover that indicate the new base station" is transmitted from the new AP.
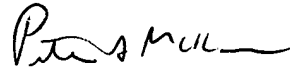
In the Office Action dated July 10, 2006, after the discussion of the rejection of claim 1, the Examiner states: "Same arguments apply, mutatis mutandis, to the independent claims 5, 9 and 13." In view of this statement, Appellant submits that the above discussion of claim 1 applies to claims 5, 9 and 13. Further, Appellant submits that the dependent claims are allowable at least by virtue of their dependence.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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CLAIMS APPENDIX

CLAIMS 1-16 ON APPEAL:

1. A short-range wireless communication system, comprising:

a host controller interface provided with a handoff buffer for buffering at least one of Host Controller Interface (HCI) data and transmission data, and for exchanging said at least one of HCI data and transmission data with an external device;

a microcontroller for forwarding to a new Access Point (AP) said at least one of HCI data and transmission data buffered in the handoff buffer if a message indicating setup completion of a connection with the external device is transmitted from the new AP after a handoff occurs as the external device moves, in a state where the new AP is interlinked with the external device.

2. The short-range wireless communication system as claimed in claim 1, wherein the microcontroller deletes said at least one of HCI data and transmission data buffered in the handoff buffer if an acknowledge ACK message for said at least one of the HCI data and the transmission data transmitted from the external device, is received.

3. The short-range wireless communication system as claimed in claim 2, wherein the microcontroller maintains said at least one of HCI data and transmission data buffered in the handoff buffer if the acknowledge ACK message for the data transmitted from the external device, is not received.

4.   The short-range wireless communication system as claimed in claim 3, wherein, if the microcontroller newly linked with a third external device receives said at least one of HCI data and the transmission data from a different AP, the microcontroller transmits said at least one of HCI data and the transmission data to the third external device immediately.

5.   A handoff processing method for a short-range wireless communication system, comprising steps of:

storing in a handoff buffer at least one of Host Controller Interface (HCI) data and transmission data upon communications with an interlinked external device in a state where a new Access Point (AP) is interlinked with the external device; and

forwarding to the new Access Point (AP) said at least one of HCI data and the transmission data buffered in the handoff buffer if a message indicating setup completion of a connection with the external device is transmitted from the new AP after a handoff occurs as the external device moves.

6.   The handoff processing method as claimed in claim 5, further comprising a step of deleting said at least one of HCI data and transmission data buffered in the handoff buffer if an acknowledge (ACK) message for said at least one of the HCI data and the transmission data transmitted from the external device, is received.

7.   The handoff processing method as claimed in claim 6, further comprising a step of maintaining said at least one of the HCI data and the transmission data buffered in the handoff

15

buffer if the acknowledge (ACK) message for the data transmitted from the external device, is

not received.

8.   The handoff processing method as claimed in claim 5, further comprising a step

of, if receiving said at least one of HCI data and transmission data from a different AP in a state

of being newly linked with a third external device, immediately transmitting said at least one of

the HCI data and the transmission data to the third external device.

9.   A Bluetooth system, comprising:

a host controller interface provided with a baseband buffer for buffering at least one of

Host Controller Interface (HCI) data and transmission data, and for exchanging said at least one

of said HCI data and the transmission data with an external device;

a microcontroller for forwarding to a new Access Point (AP) said at least one of the HCI

data and the transmission data buffered in the baseband buffer if an Inter Network Access Point

(NAP) Communication (INC) acknowledge ACK message is transmitted from the new AP after

a handoff occurs as the external device moves, in a state where the new AP is interlinked with

the external device.

10.   The Bluetooth system as claimed in claim 9, wherein the microcontroller deletes

said at least one of the HCI data and the transmission data buffered in the baseband buffer if a

baseband ACK from the external device is received.

11. The Bluetooth system as claimed in claim 10, wherein the microcontroller maintains said at least one of the HCI data and the transmission data buffered in the baseband buffer if the baseband ACK is not received.

12. The Bluetooth system as claimed in claim 9, wherein, if the microcontroller newly linked with a third external device receives said at least one of HCI data and the transmission data from a different AP, the microcontroller transmits said at least one of HCI data and the transmission data to the third external device immediately.

13. A handoff processing method for a Bluetooth system, comprising steps of:

storing in a handoff buffer at least one of HCI data and transmission data upon communications with an external device, in a state where a new Access Point (AP) is interlinked with the external device; and

forwarding to the new Access Point (AP) said at least one of the HCI data and the transmission data buffered in the baseband buffer if an INC ACK message is transmitted from the new AP after a handoff occurs as the external device moves.

14. The handoff processing method as claimed in claim 13, further comprising a step of deleting said at least one of the HCI data and the transmission data buffered in the baseband buffer if a baseband acknowledge (ACK) message is received from the external device.

15.   The handoff processing method as claimed in claim 14, further comprising a step

of maintaining said at least one of the HCI data and the transmission data buffered in the

baseband buffer if the baseband ACK message is not received from the external device.

16.   The handoff processing method as claimed in claim 13, further comprising a step

of, if receiving said at least one of HCI data and transmission data from a different AP in a state

of being newly linked with a third external device, immediately transmitting said at least one of

the HCI data and the transmission data to the third external device.

EVIDENCE APPENDIX:

NONE

RELATED PROCEEDINGS APPENDIX

NONE